PRESQUILE NATIONAL WILDLIFE REFUGE
NARRATIVE REPORT
FOR CALENDER YEAR 1968

PERSONNEL

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I. GENERAL

A. Weather Conditions

The data in the following table were provided by the Old Dominion Water Corporation in Hopewell, Virginia. The recordings were made at the city water plant about three miles down the river from the refuge. There is no official weather station on the refuge.

	Precipitation (In inches)			Temperature Average	
	1968	Normal	Snow	Max.	Min.
January	3.10	3.07	3.5	47.7	25.4
February	1.19	2.76		49.4	24.6
March	4.24	3.16	2.0	68.1	38.9
April	3.62	3.34		73.2	46.2
May	3.31	3.97		78.2	53.0
June	3.58	4.23		87.5	64.2
July	2.79	5.86		90.0	69.3
August	3.06	5.10		91.5	69.0
September	.85	3.73		84.0	59.5
October	2.89	2.88		74.7	51.1
November	3.18	2.80		64.9	42.5
December	2.71	2.78	Trace	70	13
Total	34.52	43.68	5.5		

1968 started out as a cold year with above average precipitation. Early January temperatures got down below 5°. All open areas except the river were frozen over for over a week and ice chunks larger than the ferry came down the river and caused some property damage. However, the refuge was spared of any damage. February was a little colder than average but precipitation was very much below normal. It warmed up some in March and we got good precipitation.

Throughout the spring and summer we had some long dry periods followed by heavy rains but we did not suffer any crop damage. We were lucky because people all around us suffered some loss from too much precipitation..

June, July and August will be remembered as one of the longest hot seasons on record. Everybody suffered from the heat. It cooled down a little in September but remained several degrees above normal through the first part of November.

The fall season was relatively dry until mid November. One snow of about four inches fell on December 7. It was gone in a week.

If some statements do not correspond with the weather records listed on the first page it is because there is some variation in our notes and those made by the weather recorder in Hopewell. There is also some variation in the weather between the industrial area and the refuge.

B. Habitat Conditons

1. Water

All of the waters of the refuge are tidal waters of the James River. There are about three to four feet between high and low tides. The tides are lunar and wind has about the same effect on them here as it does on the coast. It takes about eight hours for the tides to get from the ocean. An abnormally high tide causes flooding in refuge marshes and swamps thus providing the necessary water for the vegetation. Salinity thus far has been negligible in this area but there has been some concern about it during the periods of long drought we have had during the spring and summer of the last few years.

The river is so poluted and muddy there is not a chance of any submerged aquatics growing. In fact raw sewage can be seen in abundance whenever we receive several inches of rain. Some sewage treatment plants up the river overflow. There is also a large amount of industrial waste dumped into the river in Hopewell and Richmond.

As in previous years there has been several occasions during this year that large numbers of dead fish were seen on the river. Most of these fish appear to be in the herring family, and probably died from the polution when they came up the river, from cleaner waters, to spawn.

Even though salinity of the water in the area has been negligable there is a possibility that it might increase beyond the point of endurance of the vegetation if the proposed channel widening and deepening takes place; so the following chart is kept for the record. The readings were recorded by the Old Dominion Water Company in Hopewell, about three miles down the river from the refuge. The plants in the area use large quantities of water from the river. They cannot use any water that has over 50 parts per million salinity.

The highest monthly salinity readings in parts NACL per million parts of water.

Month	1965	1966	1967	1968
January	8	36	12	12
February	8	39	10	12
March	10	12	14	12
April	14	13	14	14
May	16	12	16	16
June	20	14	18	18
July	24	26	20	24
August	28	42	24	28
September	32	38	14	46
October	42	12	22	42
November	40	8	20	36
December	42	9	12	14

2. Food and Cover

This has been a good year for natural food production in the marshes and swamps. This appears to be a ditto of last years report. This ditto is made possible about every year because we don't have to depend entirely on precipitation to get the necessary water. The rise and fall of the river tides provides good water conditions to produce good crops of wild rice, millet, smartweed and a variety of other good food plants of less abundance.

It is now time to start watching our marshes rather closely to try to prevent pest plants from crowding out more desirable species. There has been some concern in the last few years about a bidens that has been growing quite rank on the higher spots in the marshes. This plant grows thick and over six feet high. There is also quite a bit of cattail in the north marsh that we should be getting concerned about. Neither one of thes plants are any problem to feeding waterfowl because the tides, birds and elements usually flatten them out and wash them away before the winter season is over. Our main concern is the fact that they might be crowding out more desirable species during the growing season. We planned to start a marsh burning program this fall but by the time conditions got right for burning most of the plants had been cleared away by the elements, etc. To get a good burn you first have to have a freeze or heavy frost with drying conditions for several days. This did not happen this year until too late. Maybe we will have better luck next year.

There has been exceptionally good usage of the east marsh. This is always the case in the east marsh. When all of the birds are here this is one of the favorite resting and loafing places for geese, and about the only area where any pintails are found. Whereas the swamp creeks and

the open areas of the swamp are the favorite areas for the blacks, mallards and wood ducks. However, in the last few years the dabbling ducks have been leaving the refuge every night and feeding on the harvested corn and silage fields on adjacent farms; but they don't use the refuge corn fields unless the weather gets very bad.

The edge of the north marsh and the river adjacent to it is the other favorite resting place for the geese. The north marsh is a higher marsh than the east marsh and there is not as large a percentage of low areas that waterfowl like to loaf in as there is in the east marsh; so it is usually after the end of the calander year before they start using the north marsh heavily. They did use it heavily in spots during late January, February and March of this year.

The refuge swamps have a large percentage of gum, ash, ironwood, maple and some oak. These all had a good crop of seed this summer.

Cultivated crops produced exceptionally good this year; and they have provided a good supplement to the natural foods and adjacent farm lands. Ducks are not very often seen on the cultivated areas of the refuge but the geese use it about every day. We do not knock the corn down before the hunting season is over so the ducks don't use it. They do use some fields on adjacent farm lands where the corn has been harvested. They especially like fields that have been harvested and hogs and cattle are feeding in. When the geese left here last spring they had used all of the corn and wheat browse. They did not leave until it was all used up. There was an abundant supply for them when they arrived here this fall. However, some real strong winds knocked a lot of the corn down and it has been a lot easier to get to this year. They might use it all before they get ready to go back north.

II. WILDLIFE

A. Migratory Birds - Geese

During the first part of January, 1968, there were 9,000 geese on the refuge but when the hunting season on them ended, the 12th, the number on the refuge dropped to 2,000. In a couple of weeks it built back up to 7,000 and stayed around that number until late February when it built up to a record 11,000. At the time there was a large cold front just north of us and a lot of geese that were migrating north stopped here to wait for the front to get by, All of the geese were gone by the end of March.

The first geese to arrive this fall was on September 16 when 12 showed up. This was the earliest on record. However it was just a few days ahead of schedule. These 12 stayed just a few days and it was around October 1 before any more showed up. The population was very slow in building up this fall. There were only 4,000 on November 1 and

7,500 on December 1. Last year there were 6,500 here before November. The high population this fall was 10,000 whereas the high last fall was 9,000 but the high for the same period two years ago was 10,000. Goose use of the refuge has been high compared to other croplands in the area. Last year for the first time they spent most of their time on the refuge croplands. They have done the same thing this year. The field hunters on the adjacent farm lands have really been complaining about the small numbers that have used their hunting areas.

The snow and blue goose population has been up a little this year over last year. The high of 200 blues and 25 snows is over last year but still 20 short of the 1966 high.

Ducks

The most significant thing about the ducks this winter has been the high population of mallards. The 6,000 is the highest number of mallards we have ever had. They have been increasing for several years.

Last year after the hunting season ended the duck population dropped drastically. That is normal. There are plenty of other areas off the refuge for ducks to gather but they have to wait until after the hunting season to do it.

The pintail population has been a little higher this year than normal. They have utilized the east marsh exclusively. The population has ranged from 500 to 1,000 all through the season. In previous seasons they have only occasionally used the refuge.

During the last week in December we had over 12,000 ducks. This is the highest duck population we have ever had on the refuge. The increased numbers of mallards and pintails contributed mostly to this high number. Most hunters in the area have been complaining bitterly because the mallards and pintails have decreased drastically in their marshes. As stated before the ducks do not depend entirely on the refuge during the hunting season. They feed at night on the harvested grain and silage fields off the refuge and come back to the refuge during the day to escape the hunters.

Diving ducks are almost nonexisting on the refuge. There are no submerged aquatics in the river and the water is never clear; so they don't stop here.

The number of 100 wood ducks produced is an estimation that could possibly vary a great deal in either direction. In fact, the summer population of 150 adult wood ducks is the same type of estimate. By taking a boat trip through all of the navigable waters of the refuge we probably don't see one third of the wood ducks present so we have to use the one third as an index for estimating the whole population. There are so many large snakes and turtles and other predators on the refuge that

it is about impossible for more than two ducks in each brood to survive.

We now have 65 wood duck boxes erected, 25 made of wood and 40 made of aluminum cylinders, and none of them have been used. However, there will be some imprinted wood ducks released in the area prior to the next nesting season. Dick Watkins on Curles Neck Farm, just across the river, raised about sixty this summer. He plans to release most of them near the refuge.

Blacks and mallards may have nested on the refuge this year but nobody actually saw any young; so we have not reported any production. One black was seen that appeared to be trying to lure us away from an area. She was either crippled or pretending to be. We looked and could not find any young or nest.

Doves

The dove population got above fifty twice during the year; but they did not stay up long enough for us to do any banding. Right after the hunting season when we knocked down some corn the doves built up to over 400 for a short while. Then right after we harvested wheat they increased to 200 for a very few days. Both of these build-up periods probably coincided with migration through the area because it looked as if they just stayed long enough to get a few good meals.

This makes two years in a row that we have had real low populations. In January of 1966 we had deep snow on the ground for several weeks and a large number of small birds and doves died. Some people think that is one cause for the present low dove population. If it is they should be recuperating by this coming season.

Other Migratory Birds

Other migratory bird numbers are at a relatively normal level. Most species present are listed on the NR-1A. We do not have records of cattle egrets spending any time on the refuge this year; but hundreds of them were seen every day during the summer months. They would fly down the river in the late afternoon in flocks of 15 to 75, flying real low over the waters or just clearing the fields or tree tops. They must have a roost near by downriver.

B. Upland Game Birds - Bob-White Quail

We probably don't average more than 25 of these birds the year around. Our farming operations are not conducive to a high quail population. There is good production every year but the surplus either gets eaten or leaves the refuge as soon as they learn to fly across the river.

Turkey

About 15 turkeys is the normal year around population on the refuge. This small refuge is believed to have all of the annual requirements of the turkey; but it is such a small area that the turkeys don't all stay on the refuge all year. They are sometimes seen flying across the river. Since they are not hunted on the refuge it is believed that they do increase some during the turkey hunting season but leave again as soon as the season is over. There are three males to every female and there is a family of red foxes so the chances of brood survival is slim. There was only one brood of two young birds seen this year.

C. Big Game Animals

The white tailed deer is the only big game animal using the refuge. At the beginning of the year there were at least 100 on the refuge. By the end of the fawning season there were over 50 more. There were at least 150 here until our bow hunt started. Twenty three were harvested during the hunt. More were killed but never retrieved. Some of the deer left the refuge by swimming the river. Some of them just went deep into the swamp where the hunters couldn't get to them. By the time the hunt was over there were probably less than 75 on the refuge. Then the gun season opened on them off the refuge and all of those that left came back; and we had our 100 back again.

The bow hunt is not doing a lot to reduce the herd but it is providing some good recreation. For recreation it would be good if we could keep a good size herd on the refuge; but it is believed that the herd is still too large for its own good. In addition to being very destructive to the refuge corn crop there is a chance of disease running wild. All specimens taken during the hunts have appeared to be disease free.

D. Fur Animals, Predators, Rodents and Other Mammals

Raccoons are on the increase. The population has been relatively low for several years but now appears to be on the rise. It is not near as high as it has been, but it is above what we think a normal population should be. Sometimes several can be seen at night in the quarter mile from the ferry to the shop. They do some damage to the corn crop also.

Muskrats are at a relatively low population level. However, it is not a real low level.

Otter tracks were seen on the refuge this year but the otter was not seen.

Mink are present but there are not many and they are very seldom seen.

Weasel are also present but seldom or never seen.

Opossums are present but not seen frequently so their population is relatively low.

Skunks are seen quite frequently but their population is not high. They just cover a lot of ground and like to hang around where they are seen more frequently.

The red fox is the only fox present on the refuge. There is one pair on the refuge. They produce one litter of three or four young every spring. They use the same groundhog hole in the north end of field 3 every year. The old foxes must chase the young off the refuge soon after the young get old enough to be independent because we never seem to have any increase even though there is apparent good survival of the young.

Groundhogs are present at a low population level. We have a control program on groundhogs. We do all of our controlling now with rifles. There were about forty groundhogs shot during this year. The foxes probably help us some. The groundhogs still do a little damage to the corn but probably no more than the squirrels or raccoons.

Cotton-tail rabbits are the only rabbits present on the refuge. There is a very small population of them and they are very seldom seen. The foxes and other predators keep them down to an extremely low level. A rabbit was seen swimming the river to get off the refuge last summer. There is a good population of rabbits all around the refuge. The marsh rabbit range comes near the refuge but none are believed to be on the refuge.

There is a good refuge population of grey squirrels on the refuge. They have neither decreased nor increased in the last year.

The beavers that live in the lake on Doggam Farm, just across from the east side of the refuge, have apparently only occasionally used the refuge. No signs of them were seen on the refuge all summer and early fall; but when cold weather got here they started chewing on the trees on the east side of the refuge.

No one species of predators are at a real high population level but when the total of all species is added up they present somewhat of a problem. The rabbits never seem to get higher than just a few; and the quail produce young but their population never seems to increase. The raccoons are a problem around the duck traps and the foxes are a problem around the dove traps. The hawks and owls are also a problem around the traps.

E. Hawks, Eagles, Owls, Crows, etc.

The red-tailed and red-shouldered hawks are the most numerous in the area. They do more than the raccoons in getting ducks out of the traps. That is because we don't let the ducks stay in the traps overnight.

The red-shouldered outnumber all others and is here all year. The other hawks are seldom seen except for the sparrow hawk in the winter months.

We had three eagles occasionally using the refuge in January of 1968 but two of them left early in the year. The other left late in the year and we haven't seen any this fall. We have heard that some eagles are building a nest on Hogg Island, a state refuge about forty miles down the river from here. That might be the eagles that were here. We haven't checkd out the story yet.

The barred owl is the only owl that has been seen or heard this year. There are supposed to be some great horned owls on the refuge but they have not been seen in several years. There are probably some of the small species present but we don't ever see them. We don't get out much at night.

An osprey or two was seen in the refuge vicinity frequently this past summer. They have all gone south for the winter. They do not have a nest on the refuge but it must be nearby.

Crows might occasionally get over one hundred in numbers on the refuge, but this is seldom. This is just a small part of their daily range. Usually they number less than fifty. Their numbers might double when they occasionally come across the river to raid the pecan and apple trees. They pull up some corn when it first starts coming up, but haven't yet caused any serious damage. There are no known roosts or nesting areas near the refuge.

F. Other Birds

No unusual sightings have been made during the year.

G. Fish

The refuge does not have any water suitable for fishing in. The river around the refuge is Proclamation Water and it is extremely poluted. There are plenty of catfish and carp at all seasons and stripped bass during certain times of the year, but the polution in the water makes them inedible. They taste like oil. There are a couple of commercial fisherman that catch and ship the catfish north and get a pretty good price for them. We don't keep any records of how many people fish or how much they catch.

H. Reptiles

The refuge reptile population has remained relatively high throughout the year. This is probably one of the controlling factors on the wood duck production. There is a high number of large water snakes and some large cotton-mouth moccasins in the refuge swamp creeks. There is also a very high population of yellow bellied and snapping turtles. These two could cause a large mortality in wood ducks. Our one turtle trapping permitte did not do good. We hope to reduce the price of the permit this year; and try to get someone that will put more effort in trying to trap them.

I. Disease

None evident.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

Farming and banding operations account for a major portion of our time. Maintenance and rehabilitation on farming equipment, vehicles, buildings, deer fence, roads and trails, and the ferry system is carried out as time permits.

We have spent more time and money on the ferry system this year than normal. Listed below are the major expenses involved in the ferry upkeep.

1. Cleaned mud out of the ferry slips two times with refuge equipment and hired it done with a backhoe one time.

2. Put ferry in drydock and had it sandblasted, holes welded up, and painted with several coats of paint. The bottom was pretty well eaten up. It had been too long in the water and should not be left in more than two years before the next repainting.

3. Changed ferry cable three times, the rollers and bull wheel twice.

4. Installed signs on the ferry to warn boaters of the cable; so they won't try to pass too close and hit the cable.

5. We repaired all of the holes in the deer fence. This should be the last time. We repaired it and ran the deer out the gates and two days later counted thirty in the farming area that didn't know how to get out-because all of their escape holes were repaired. They swim around the fence to get in and then you have to chase them out. With the holes they go out every night.

6. We did some reposting of the refuge boundary; and we posted the Proclamation Boundary, a job that should have been done fifteen years ago but had never been started. It involved quite a bit in that we first had to get permission from the Corps of Engineers and then locate a jet pump that was strong enough to jet the posts in the rocky riverbed.

7. We purchased and installed a new and wider concrete cattle guard on the entrance road.

8. We installed a new submersible pump and replaced the plastic pipe with metal pipe on the refuge well.

9. We purchased a new refuge entrance sign and put it up at the ferry landing. A stone monument will be built around it when we can find time - and somebody with stone laying experience.

10. We had the refuge office wired for an air conditioner and borrowed an air conditioner from GSA.

11. Installed a humidifier on the furnace in quarters 1.

12. We acquired an excess 4x4 dump truck from Chincoteague Refuge and spent several hundred dollars and a lot of time getting the brakes repaired and making it safe for highway travel.

13. Acquired a winch and installed it on a chain saw motor and put it to good use in cleaning trees and stumps out of swamp creeks.

The following list is of material received from property disposal at Fort Lee and Defense General Supply Center.

1. Several loads of scrap metal, mostly pipes for installing wood duck boxes on.

2. Some scrap rollers like truckers use to unload boxes. We put them down at a boat landing to pull a small boat out of the water on; so the boat would be above high tide mark.

3. A scrap clothing locker to hang foul weather clothing in.

4. Six cold weather flying coats for patrolling and banding in.

5. Two 600x16 tractor tires.

6. A McCulloch chain saw to get the motor off so we could install it on a Versa-Pull Winch.

7. A small gear puller.

8. A ½ inch electric drill to be used mostly to drive our grain auger. This kept us from having to purchase a new motor for the auger.

Some of the new equipment purchased this year.

1. A three bottom 14 inch moldboard plow.

2. A 14 foot aluminium flat bottom boat.

3. Four picnic tables and a grill.

4. A Versa-pull winch.

5. A set of three jet cannons.

6. A small lawn mower for trimming in headquarters areas where tractor mower can't get to.

B. Plantings

1. Aquatics and Marsh Plants

None.

2. Trees and Shrubs

None.

3. Upland Herbaceous Plants

None.

4. Cultivated Crops

Corn - 56 acres
Wheat - 76 acres
Buckwheat overseeded with ryegrass - 10 acres

We followed the same general farming procedures this year that we have been practicing for several years. All cultivated land is planted in corn or wheat except ten acres of strips in the corn fields that we plant buckwheat overseeded with ryegrass in. All cultivated crops are planted on a two year rotation except on the ten acres that we harvest the wheat. We plant our ten acres of wheat harvest allotment on the same ten acres every year, field number 8a.

We usually plow up 66 acres of the wheat browse in the early spring and that is where we plant corn. We usually leave a fifty foot strip through the middle of the two large corn fields for buckwheat overseeded with ryegrass.

All wheat and corn is planted in fields 2 and 5 except for the ten acres of wheat harvest allotment in field 8a.

Field 2 is divided into four 26 acre fields and field 5 is divided into 7 acre fields. During this year we have slightly increased the sizes of fields 2 and 5 by taking in parts of fields of permanent pasture that were adjacent. However, we took four acres of the point of field 5 and planted permanent clover in it and now call it field 4.

We usually just plow the fields that we plant corn in and only disc in the fields we plant wheat browse in. This year we plowed all corn and wheat land and layed off the fields so we would have four equal sized fields in fields 2 and 5. Soil samples showed that all of our fields were low in organic content; so after we planted corn we sowed soybeans for green manure in the fields that did not have corn planted. In August we plowed in the soybeans and in September we planted wheat where soybeans had been.

This year we will sow soybeans where we planted corn last year. Then all fields will have had a soybean application.

Soil samples showed field number 5 had a low pH so we applied limestone at the rate of one ton per acre.

Fertilizers and nitrogen and chemical treatments of croplands were as follows:

Just before planting corn, after plowing and discing, we applied to the corn land 600 lbs. of 5-10-10 per acre.

After planting corn as it started to germinate we applied nitrogen at the rate of 60 lbs. per acre and Atrazine at the rate of 2 lbs of 80% wettable powder mixed in with the nitrogen.

On soybeans we applied 60 lbs. of nitrogen per acre.

Just before planting wheat we applied 10-6-10 at the rate of 400 lbs. per acre. We applied 800 lbs per acre to the ten acres to be harvested.

Corn produced very good. Some spots made near 100 bushels per acre; and some spots made a great deal less. There are some sandy spots that don't ever make real good. We probably averaged around 80 bushels. Native wildlife, mostly deer, worked on the corn from the time it started coming up until the present time. The animals devoured an estimated 20% of the total crop. This is a little less than last year.

This year we planted DeKalb XL-45 corn in 21 acres of field number 2 and Golden Acres Growmaster in the other 21 acres of field number 2; and we planted Pioneer-345 in 14 acres of field number 5.

Last year the wheat browse was good but not real good. The seed wheat produced no more than 20 bushels per acre, but this was more than we needed for planting. We purchased new seed this year for planting the ten acres that are to be harvested. This is the first time wheat seed have been purchased in several years. We purchased Blueboy seed; so we should get better production this year. We have had very good luck with wheat browse this fall. We had a real dry spell right after we planted but precipitation finally came and cold weather held off until the browse got up to where it is best. There has been more than enough for the geese that have been here to use it. The soybeans that were plowed under in the wheat fields did a lot of good.

The buckwheat was planted late in the season in the strips through the corn fields. The buckwheat came up and grew real good until we plowed the soybeans under. Then the deer hit it. As usual, they took most of it before the geese arrived. This is planted for the geese but they don't ever get much of it. This is probably not bad because it probably takes some of the deer pressure off the corn crop. We need the strips through the corn fields for the geese to use in getting to the corn.

The ryegrass that was overseeded in the buckwheat strips did real good and probably also served to take some deer pressure off of the corn.

The 93 acres of permanent pastures serve mostly as watersheds to prevent erosion. They have been almost pure stands of fescue and provided very little food. Clover was seeded in with the fescue when the pastures were established but since that time the clover has been crowded out. Several times since they were established parts of these pastures have been plowed up and disced and clover reintroduced but the fescue has kept crowding it out. During the fall of 1967 some of the pastures were overseeded with clover and treated with a small amount of low nitrogen fertilizer. During this summer that seeded in field number 3, down along the deer fence, made a fairly good stand in the low areas. The four acres of permanent clover planted in field number 4 last fall made an excellent stand; but after the geese found it it was gone the next day. However, this along with the good spots of it in the permanent pastures provided some good deer food until the geese found it.

Field number 4 was taken out of regular cultivation because it was so small and triangular shaped and was a lot of trouble to plant row crops in. It will probably pass through the good clover stage in a few years. Then we will have to plant a grass species in it for a few years before we reseed it to clover.

None of the permanent pastures received any fertilizer treatments during this year; but they did grow good and had to be mowed at least once a month throughout the growing season.

C. Collections and Receipts

Seed purchased during the year included the wheat, corn, buckwheat, ryegrass and soybeans that we planted. We purchased 10 bushels of wheat, 13 bushels of seed corn, 600 lbs. of buckwheat, 500 lbs. of ryegrass and 76 bushels of soybeans. We purchased only enough wheat to plant on the ten acres of harvest allotment.

We harvested about 200 bushels of wheat from our harvest allotment. We planted 150 bushels of this and still have about 50 bushels. We will use most of this to try to trap some waterfowl with.

We had 350 bushels of corn harvested this year to be used in trapping waterfowl as soon as the hunting season is over. We had 200 bushels on hand at the beginning of the year and we used it all for banding.

D. Control of Vegetation

Chemical control of weeds in the corn fields was obtained by an application of two pounds of 80% Atrazine per acre. This was applied mixed in with the nitrogen at corn germination time. We used 105 pounds at a cost of $262.50 or $2.50 per pound. The main pest weed species in our corn fields is Jimson weed. We obtained 98% kill on all corn field weeds. We only had to cultivate the corn one time and this was more to loosen up the hard packed soil than to kill weeds. The lack of weeds in the corn help some in goose utilization in that they will venture deeper into it to feed if there are not any thick places for predators to hide.

About five acres of the corn had to be treated with a one percent solution of 2-4D to kill out some small infestations of weeds that the Atrazine didn't get. This was done with the refuge sprayer operated by the tractor PTO. The treatment was about 80% effective. The cost was about $15.00 or $3.00 per acre.

Spot infestations of Johnson grass were treated in most of the refuge fields and along the deer fence. Some treatment was with Dalapon at the rate of five pounds of acid equivalent per acre. Some treatments were by discing and spraying and in some places we just disced it. Kill ranged from 50% where we only sprayed and where we only disced to 80% where we sprayed and disced. We treated about ten acres at a cost of about $14.00 per acre.

E. Planned Burning

We planned to burn the marshes but we could never get conditions right for fire to carry; so we will have to wait another year to carry out these plans.

F. Fires

None.

IV. RESOURCE MANAGEMENT

A. Grazing

None.

B. Haying

None.

C. Fur Harvest

None.

D. Timber Harvest

None.

E. Commercial Fishing

There are several commercial fisherman using the Proclamation Waters of the James River around the refuge. No permits are issued and no checks are made of their catch. However, in a casual stop to talk with them all you see is a lot of real small catfish that will be thrown back. The fisherman use traps and trot lines. They ship their catch to the New York and Chicago markets. Nobody around here would eat them.

F. Other Uses

One special use permit was issued this year for $20.00 to catch turtles on the refuge. We advertised that we would issue two but only one person showed interest. This man got discouraged easily and had a lot of other jobs to tend to so he never caught any turtles. He tried a couple of times but did not get any. We hope we can try one more year to get somebody to go in and clean out the turtles; so maybe we will obtain a higher survival rate of young wood ducks.

V. FIELD INVESTIGATION AND APPLIED RESEARCH

A. Progress Report

The goose net was thrown twice in 1968 and a total of 249 geese were banded. There will probably never be a large number of geese handed here until we get permission to band them during the hunting season. However, we now have a set of jet cannons so we can possibly use more than one trapping site; so maybe we can get more geese in 1969. We have a very wary population of geese that know when a place is dangerous to them. Once we throw a net they will not come back to that site for a month or more. Prior to this year we only had one net site; but we are hoping that we can use the jet set wherever they are congregating. We hope we don't scare them entirely off the refuge.

We started banding ducks when the hunting season was over and we banded 501 blacks, 419 mallards, 25 wood ducks, one widgeon, one pintail and 23 black-mallard crosses. We could have possibly banded more but the hawks and raccoons got so bad around the traps that we decided it was best to stop.

Late this fall we had a high population of wood ducks so we baited and tried to do some pre season banding. About all we caught was blacks and mallards so we decided to wait until after the hunting season. We banded 28 ducks as demonstrations for scout groups visiting the refuge.

VI. PUBLIC RELATIONS

A. Recreational Use

There are no established recreational areas on the refuge. However, during this year we did purchase four picnic tables and a grill and put them in the grove of trees in the headquarters area. This provides a place for visitors to eat their lunches. Previous to this they had to eat off the back of the truck or the ground. Due to the small number of personnel and the fact that everybody that visits the refuge has to be brought in on the ferry we cannot go out and get every individual that desires to visit the refuge; so we only bring in organized groups. Most of these are on Saturday and we donate the time.

Tours of the croplands area are conducted to acquaint the public with refuge objectives and allow them to see some wildlife in a natural environment. The waters around the refuge are used for boating, water skiing and fishing but no counts are made of the use days. The river is so muddy and poluted there are very few people that would go swimming in it, and nobody except a very hungry person can eat the fish out of it.

Refuge tours were provided for six Scout groups, three church groups and two groups of interested adults from Hopewell. This was a total of 157 use days by organized groups. Bow hunters hunted a total of 323 hunter days and bagged 23 deer. Bow hunters spent 50 days on the refuge scouting prior to hunting.

B. Refuge Visitors

There were 885 official and unofficial visitors to the refuge in 1968.

Listed below are most of the significant official visitors to the refuge.

1-4-68	Mr. P. I. Leadbetter Judge	Hopewell, Va.	Observe Wildlife

1-4-68	Mr. C. Hardway Marks Lawyer	Hopewell, Va.	Observe Wildlife
1-4-68	Mr. George Fields Lawyer	Hopewell, Va.	Observe Wildlife
1-4-68	Mr. J. J. Vergara Real Estate Dealer	Hopewell, Va.,	Observe Wildlife
1-16 to 18-68	Mr. Otto Florschutz	Washington, N.C.	Official
1-20-68	27 members of Va. Natural History Society	Richmond, Va.	Bird Watching
1-27-68	15 employees & family from Allied Chemical	Hopewell, Va.	Nature Observation
1-27-68	16 members of Boy Scout Troop 177	Chester, Va.	Nature Observation & Picnic
1-30-68	34 members of Kindergarten Class St. James School	Hopewell, Va.	Nature Outing
3-2-68	26 intermediates from Branches Methodist Church	Richmond, Va.	Annual Trip & Picnic
3-2-68	16 Boy Scouts from Troop 922	Chester, Va.	Nature Study & Picnic
5-2-68	Mr. Tom Heston Hopewell News	Hopewell, Va.	A story
5-4-68	30 Brownies	Hopewell, Va.	Nature Outing & Picnic
7-24 & 25-68	Mr. Stanley Osolinski, Jr.	Detroit, Mich.	Wildlife Photography
8-16-68	8 Royal Rangers from Assembly of God Church	Hopewell, Va.	Picnic
8-21 & 22-68	Mr. Bill Reid	R O	Quarters Appraisal

8-21 & 22-68	Mr. Elliott Atstupenas	Harrison Lake Hatchery	Quarters Appraisal
9-13-68	Mr. Charles Hardin	R O	Comprehensive Inspection
9-13-68	Mr. Walter Stieglitz	R O	Comprehensive Inspection
9-26-68	Mr. Otto Florschutz	Washington, N.C.	Preparations for Deer Hunt
10-17-68	Mr. Otto Florschutz	Washington, N.C.	Assist on Deer Hunt
10-9-10-11-68	50 Bow Hunters	Virginia	Scouting Area prior to hunting
10-17 thru 11-1-68	323 Bow Hunters	Virginia	Hunting
11-9-68	37 Boy Scouts	Chester, Va.	Lecture Tour & Picnic
11-23-68	80 Girl Scouts	Chester, Va.	Lecture Tour & Picnic
12-7-68	23 Brownie Girl Scouts	Chester, Va.	Lecture Tour & Picnic
12-21-68	Dr. Abner Robertson	Richmond, Va.	Christmas Bird Count

C. Refuge Participation

Participation by refuge personnel in civic and conservation affairs has been rather limited this year. Only one talk was made and one film, Wildlife Babies, was shown to a group of 25 interested hunters from the Hopewell-Petersburg area. This was an extremely interested group in that some of them were rather influential people that had just gone through a poor hunting season and were convinced that the refuge had been putting out large quantities of bait to keep the birds on the refuge.

We believe we were able to convince them that the refuge helps hunting in the area.

About all of the newspapers in the area had one or more articles on the refuge bow hunt. This activity has provided some good public relations for the refuge as well as some wildlife oriented recreation.

D. Hunting

Bow hunting for white-tailed deer is the only hunting permitted on the refuge. This year we had a drawing and issued 300 permits to hunt on eight days. That was 75 permits for each of four 2 day periods between October 17 and November 1. Two hundred eleven hunters hunted 323 days and bagged 23 deer. They killed more but that is all that were located before they spoiled. We found four dead deer on the refuge shortly after the hunt. The deer left the refuge in every direction as soon as the hunting started. We know there were six killed on Curles Neck Farm that were the result of our hunt. Bow hunters were lined up along the shores on the other side of the river, off the refuge, waiting for the deer to leave the refuge. There were probably more killed but we didn't hear about them. About two thirds of the kill were this year's young.

The hunt was started because we needed to reduce the population and figured that it was a good way to provide some recreation. We reduced the population some but not as much as we had hoped for. However, if we keep it up for several more years we should gradually get the population down to a desirable level. Next year we hope to increase the kill some by allowing the hunters to use small boats to get into the refuge creeks. Some of the deer have been going into the swamp where the hunters could not get to them rather than leaving the refuge.

The gun hunting season opened on deer in this area two weeks after our hunt ended; and most of the deer that had left the refuge came back. It doesn't look like we reduced the population very much. Eighty were counted in the refuge cultivated area one night in late December

Waterfowl hunting has been very poor in this area for the last two years. About all of the hunters are complaining bitterly about the lack of waterfowl in the areas that have traditionally been good hunting areas. They did not kill a single goose in the fields on Curles Neck Farm this year; and they just killed a very few on Presque Isle Farm.

E. Violations

No formal cases were made by refuge personnel during this year. We don't think any violations occurred on the refuge. Some small planes buzzed the refuge at low altitudes several times but we called their home fields and got them to stop. They were using the refuge as an area

for practicing part of their flight training. They were very apologetic and promised to stop. They did.

F. Safety

At least one formal safety meeting or several informal safety discussions were held each month during the year. Highway safety was probably discussed more than any other subject. Except for a few weeks when we had a laborer only three full time male employees are on duty, and safety aspects were discussed as they occurred.

To date we have never had a lost time accident on Presquile Refuge. The refuge was activated March 11, 1953. We have worked 5,446 days or 78,239 employees hour .

Some of the actions taken for safety sake during the year:

All permanent employees took the Defensive Driving Course.

Replenished all soda and acid extinghishers and relocated them to places where they would not be as likely to freeze.

Posts were put up in the washouts around the high river banks to keep people from driving into them.

To warn people that are passing the ferry that there is a cable in the water signs were painted and installed on each side of the ferry.

New life rings were purchased and installed on the ferry and both ramps.

A stop sign was acquired and installed at the ferry landing to keep people from driving off the ramp.

Extended the vent pipe on the gas storage tank to the required length.

VII. OTHER ITEMS

A. Items of Interest

Since 1968 ended and the writing and typing of this report started we have taken the following wildlife notes.

We have learned that an adult eagle was seen on the refuge on December 21 by several members of the Virginia Society of Ornithology during the Christmas Bird Count. They were looking at the refuge with a scope from across the river.

Evening Grossbeaks were seen on the refuge by Manager Fields on

January 1 and several times since then. This is the first record for this bird in a long time.

Two beavers were seen on the refuge by Biological Technician McFarland and Maintenanceman Vick on January 29. This is the first sight record for beaver even though there have been a lot of signs seen.

One flock of at least 25 turkeys were seen on January 15 by McFarland and Vick. This is at least nine more than has ever been seen at one time on the refuge and nine more than we have ever reported using the refuge. These are all items that will be reported on the next narrative but of such interest that they should be mentioned here.

During this year Biological Technician McFarland was promoted from a GS-5 to a GS-6; and Clerk Typist Lipchak was promoted from GS-2 to GS-3 and given a part time appointment.

B. Photographs

What there is of them are shown on following pages.

C. Signature

Submitted By:

John C. Fields

John C. Fields
Refuge Manager

Dated February 4, 1969
Approved by:

Regional Office Walter O. Stieglitz
Assistant Regional Supervisor
FEB 6 1969

3-1750
Form NR-1
(Rev. March 1953)

WATERFOWL

REFUGE Presquile National Wildlife MONTHS OF January TO April, 19[illegible]

(1) Species	(2) Weeks of reporting period: 6 days 1	1/7-1/13 2	1/14-20 3	1/21-27 4	1/28-2/3 5	2/4-2/10 6	2/11-17 7	2/18-24 8	2/25-3/2 9	3/3-9 10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	8750	9000	2000	9000	7500	7000	5500	9000	11,000	9500
Cackling										
Brant										
White-fronted										
Snow	17	17	10	15	10	15	15	15	20	15
Blue	150	140	100	125	110	120	110	120	140	110
Other										
Ducks:										
Mallard	3500	3000	1200	1100	400	250	200	200	200	150
Black	1800	1500	1000	900	300	400	500	500	400	250
Gadwall										
Baldpate										
Pintail	450	500							300	150
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood	1500	1100	500	250	150	150	150	150	150	150
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead	15	25	15	10						
Ruddy	25	20	10	10						
Other										
Merganser	40	50	25	20	30	30	30	40	35	
Coot	10									

3-1750a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Presquile N W R MONTHS OF January TO April, 1968

(1) Species	(2) Weeks of reporting period: 3/10-16 (11)	3/17-23 (12)	3/24-30 (13)	3/31-4/6 (14)	4/7-13 (15)	4/14-20 (16)	4/21-27 (17)	3 days (18)	(3) Estimated waterfowl days use	(4) Production: Broods seen	Estimated total
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada	5500	350	30	12	8	6	1	1	552.352		
Cackling											
Brant											
White-fronted											
Snow	5								1.081		
Blue	60								8.775		
Other											
Ducks:											
Mallard	150	50	25	20	15	8	8	8	69.506		
Black	150	150	50	40	25	15	10	6	54.148		
Gadwall											
Baldpate											
Pintail	50								9.350		
Green-winged teal											
Blue-winged teal	50	40							630		
Cinnamon teal											
Shoveler	25	15							280		
Wood	100	125	125	125	150	150	150	150	33.075		
Redhead											
Ring-necked											
Canvasback											
Scaup											
Goldeneye											
Bufflehead		10							320		
Ruddy	15	75							1.060		
Other											
C. Merganser	20	15	15	15	10	6			2.992		
Coot:									60		

(Over)

	(5) Total Days Use	(6) Peak Number	(7) Tota Production
Swans			
Geese	562,188	11,160	
Ducks	171,551	7,350	
Coots	60	10	

SUMMARY

Principal feeding areas Refuge fields and marshes by geese and the swamps and marshes by ducks.

Principal nesting areas

Reported by John C. Fields

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species — In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: — Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: — Average weekly populations x number of days present for each species.

(4) Production: — Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use: — A summary of data recorded under (3).

(6) Peak Number: — Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: — A summary of data recorded under (4).

3-1750a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE [illegible] MONTHS OF May TO August, 19[illegible]

(1) Species	(2) Weeks of reporting period: 11 (7/7-13)	12 (7/14-20)	13 (7/21-27)	14 (7/28-8/3)	15 (8/4-10)	16 (8/11-17)	17 (8/18-24)	18 (8/25-31)	(3) Estimated: waterfowl: days use	(4) Production: Broods: seen	Estimated: total
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard	4	6	4	4	4	12	26	32	[illegible]	[illegible]	[illegible]
Black	6	6	6	6	6	28	40	42	1[illegible]0	[illegible]	[illegible]
Gadwall											
Baldpate											
Pintail											
Green-winged teal											
Blue-winged teal											
Cinnamon teal											
Shoveler											
Wood	100	100	100	100	15	175	200	30	19,300	25	100
Redhead											
Ring-necked											
Canvasback											
Scaup											
Goldeneye											
Bufflehead											
Ruddy											
Other											
Coot:											

(Over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese			
Ducks	21,[illegible]	97	[illegible]
Coots			

SUMMARY

Principal feeding areas [illegible]

Principal nesting areas [illegible]

Reported by [illegible]

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species — In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: — Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: — Average weekly populations x number of days present for each species.

(4) Production: — Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use: — A summary of data recorded under (3).

(6) Peak Number: — Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: — A summary of data recorded under (4).

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Form NR-1
(Rev. March 1953)

WATERFOWL

REFUGE Presquile National Wildlife Refuge

MONTHS OF May TO August, 19 68

(1) Species	(2) Weeks of reporting period: 1 (5/1-4)	2 (5/5-11)	3 (5/12-18)	4 (5/19-25)	5 (5/26-6/1)	6 (6/2-8)	7 (6/9-15)	8 (6/16-22)	9 (6/23-29)	10 (6/30-7/6)
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other	8	6	6	6	6	6	6	6	6	6
Ducks:	6	6	6	6	6	6	6	6	6	6
Mallard										
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal	150	150	125	250	225	250	150	125	100	100
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										

3-1750
Form NR-1
(Rev. March 1953)

WATERFOWL

REFUGE Presquile N W R MONTHS OF September TO December, 1968

(1) Species	(2) Weeks of reporting period: 1 (9/1-7)	2 (9/8-14)	3 (9/15-21)	4 (9/22-28)	5 (9/29-10/5)	6 (10/6-12)	7 (10/13-19)	8 (10/20-26)	9 (10/27-11/2)	10 (11/3-9)
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	-	-	12		100	1,000	1,000	1,000	4,000	4,500
Cackling										
Brant										
White-fronted						2	1	1	4	20
Snow									26	75
Blue										
Other										
Ducks:										
Mallard	5	30	40	40	75	500	200	750	2,000	2,000
Black	10	30	50	75	100	750	500	1,000	3,000	3,000
Gadwall										
Baldpate					10				25	25
Pintail	25	25	25	40	100	150	25	25	250	200
Green-winged teal				10	20	25		10	25	
Blue-winged teal	25	25	20	60	15	50		10		
Cinnamon teal										
Shoveler										
Wood	200	250	300	300	300	1,000	1,000	1,200	2,500	2,500
Redhead										
Ring-necked									5	
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy								15	20	20
Other								20	20	
Coot										

3-1750a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Presqu'ile N W R MONTHS OF September TO December ,19 48

(1) Species	(2) Weeks of reporting period 11/10-16 11	11/17-23 12	11/24-30 13	12/1-7 14	12/8-14 15	12/15-21 16	12/22-28 17	12/29 - 18 etc.	(3) Estimated waterfowl days use	(4) Production Broods seen	Estimated total
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada	5,000	7,500	7,500	7,500	9,500	10,000	10,000	10,000	510,284		
Cackling											
Brant											
White-fronted											
Snow	25	25	25	25	30	25	25	25	1,531		
Blue	150	175	175	160	200	175	175	175	9,625		
Other											
Ducks:											
Mallard	2,500	3,000	3,000	3,000	4,400	4,300	4,200	6,000	228,280		
Black	2,000	2,500	2,200	2,400	3,500	3,600	3,600	3,500	207,305		
Gadwall											
Baldpate			25		50	50	20		1,435		
Pintail		300	350	400	450	500	500	500	24,705		
Green-winged teal			50	25	50	30		10	24,950		
Blue-winged teal											
Cinnamon teal											
Shoveler											
Wood	1,800	2,100	2,500	2,300	2,300	2,200	2,000	2,000	179,250		
Redhead											
Ring-necked			10						105		
Canvasback											
Scaup			20						140		
Goldeneye											
Bufflehead			5	5	10	10	10	10	310		
Ruddy			15	25	20	30	20	10	1,185		
Other Merganser			25	20	150	150	150		3,485		
"					10	10	25	10	305		
Coot:	10	10	10	5	10	10			805		

(Over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans				Principal feeding areas
Geese	521,440	10,200		
Ducks	671,475	12,040		Principal nesting areas
Coots	805	20		
				Reported by

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) **Species** — In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: — Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: — Average weekly populations x number of days present for each species.

(4) Production: — Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

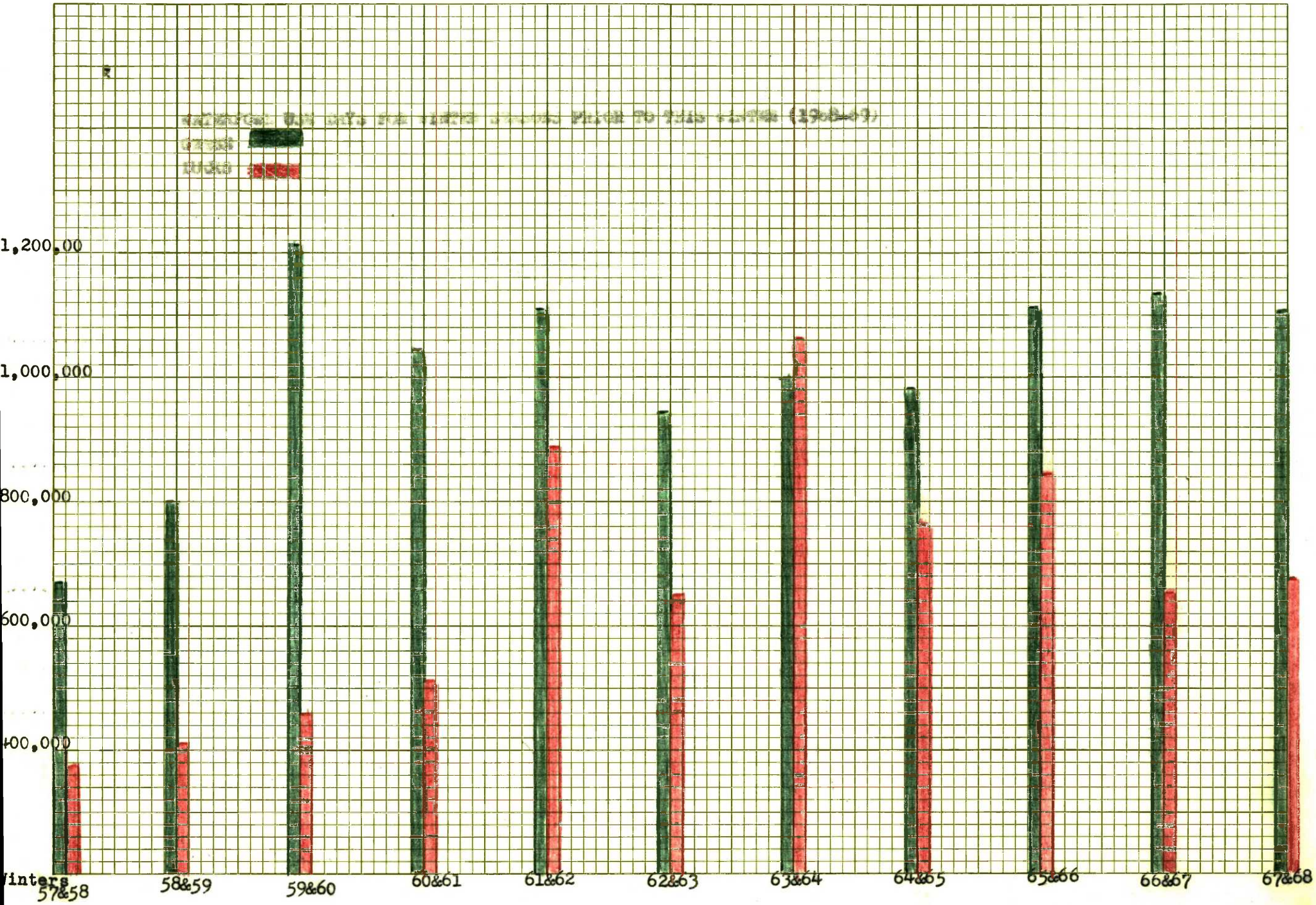
(5) Total Days Use: — A summary of data recorded under (3).

(6) Peak Number: — Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: — A summary of data recorded under (4).

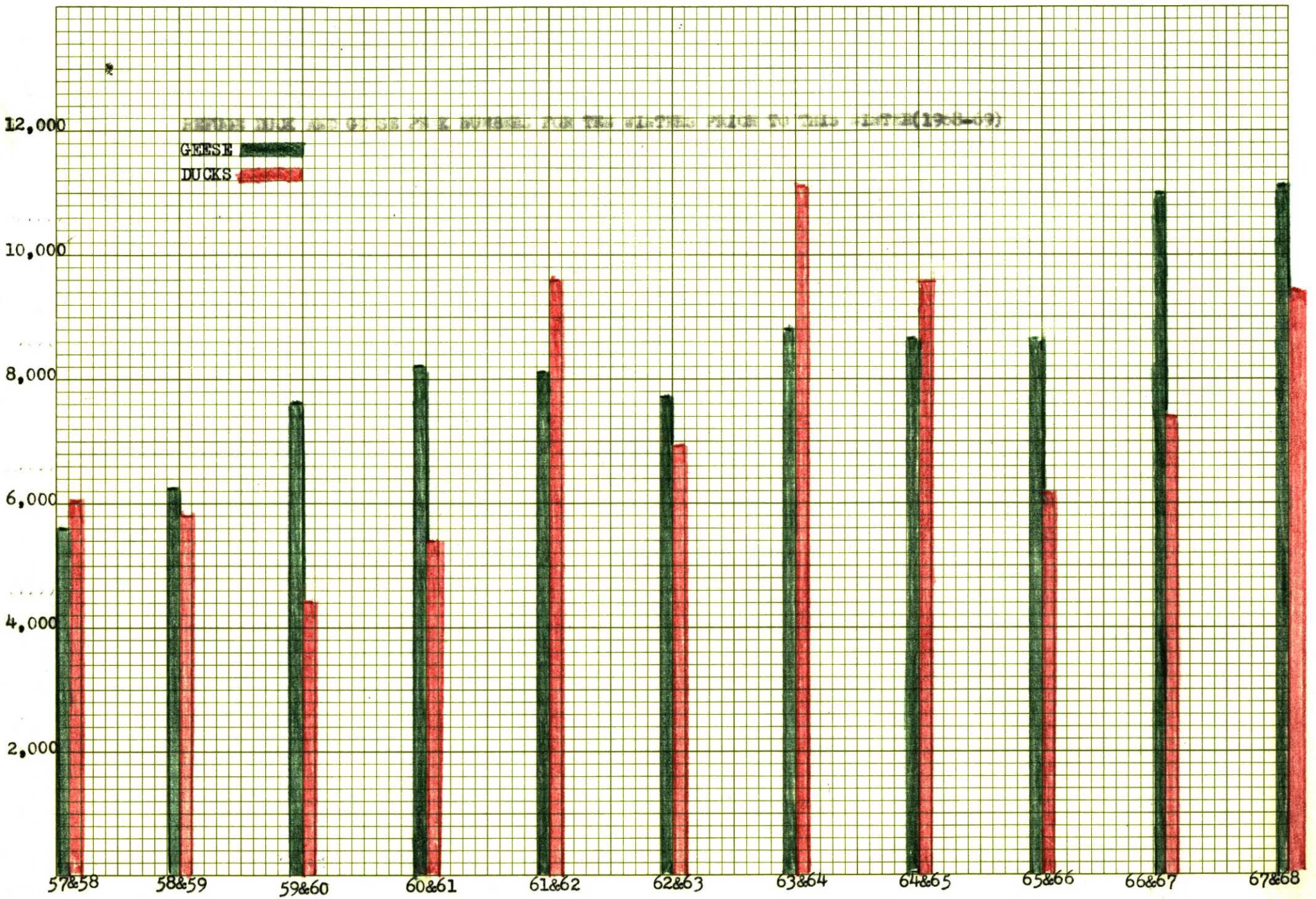
NO. 341-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.



NO. 341-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.



3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Presquile N W R Months of January to April 1968

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Great Blue Heron	8	1-1-68	20	3-1-68	16	4-30-68	0	0	0	1,800
Little Green Heron	2	4-12-68	6	4-30-68	6	4-30-68	0	0	0	50
American Egret	1	4-25-68	1	4-25-68	1	4-25-68	0	0	0	5
Cattle Egret	5	4-20-68	5	4-20-68	5	4-20-68	0	0	0	15
II. Shorebirds, Gulls, and Terns:										
Laughing Gull	6	4-14-68	60	4-30-68	60	4-30-68	0	0	0	450
Ring-billed Gull	175	1-1-68	270	4-25-68	200	4-30-68	0	0	0	17,000
Herring Gull	60	1-1-68	140	1-30-68	100	4-30-68	0	0	0	8,000
Great black-backed Gull	15	1-1-68	25	1-11-68	5	3-25-68	0	0	0	450
Bonaparte Gull	5	1-1-68	15	1-11-68	2	4-30-68	0	0	0	300
Royal Tern	2	4-15-68	5	4-30-68	4	4-30-68	0	0	0	50
Common Tern	3	3-25-68	10	4-30-68	10	4-30-68	0	0	0	90
Killdeer	15	1-1-68	30	2-15-68	2	4-30-68	0	0	0	500
Common Snipe	21	1-1-68	21	1-1-68	4	4-30-68	0	0	0	650
Greater Yellowlegs	5	4-10-68	3	4-30-68	3	4-30-68	0	0	0	100
Spotted Sandpiper	4	4-15-68	40	4-30-68	20	4-30-68	0	0	0	550

(over)

(1)	(2)		(3)		(4)		(5)			(6)
III. Doves and Pigeons:										
Mourning dove	50	1-1-68	400	2-15-68	25	4-30-68	0	0	0	3,500
White-winged dove										
IV. Predaceous Birds:										
Golden eagle										
Duck hawk										
Horned owl										
Magpie										
Raven										
Crow	60	1-1-68	60	1-1-68	50	4-30-68	0	0	0	3,750
Bald Eagle	3	1-1-68	3	1-1-68	1	3-2-68	0	0	0	100

Reported by

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

(1)	(2)		(3)		(4)		(5)			(6)
III. Doves and Pigeons:										
Mourning dove	50	1-1-68	400	2-15-68	25	4-30-68	0	0	0	3,500
White-winged dove										
IV. Predaceous Birds:										
Golden eagle										
Duck hawk										
Horned owl										
Magpie										
Raven										
Crow	60	1-1-68	60	1-1-68	50	4-30-68	0	0	0	3,750
Bald Eagle	3	1-1-68	3	1-1-68	1	3-2-68	0	0	0	100

Reported by

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Pinequile N W R Months of January to April 1968

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Great Blue Heron	8	1-1-68	24	3-1-68	16	4-30-68	0	0	0	1,800
Little Green Heron	2	4-12-68	6	4-30-68	6	4-30-68	0	0	0	50
American Egret	1	4-25-68	1	4-25-68	1	4-25-68	0	0	0	5
Cattle Egret	5	4-20-68	5	4-20-68	5	4-20-68	0	0	0	15
II. Shorebirds, Gulls, and Terns:										
Laughing Gull	6	4-14-68	60	4-30-68	60	4-30-68	0	0	0	450
Ring-billed Gull	175	1-1-68	270	4-25-68	200	4-30-68	0	0	0	17,000
Herring Gull	60	1-1-68	140	1-30-68	100	4-30-68	0	0	0	8,000
Great black-backed Gull	15	1-1-68	25	1-11-68	5	3-25-68	0	0	0	450
Bonaparte Gull	5	1-1-68	15	1-11-68	2	4-30-68	0	0	0	300
Royal Tern	2	4-15-68	5	4-30-68	4	4-30-68	0	0	0	50
Common Tern	3	3-25-68	10	4-30-68	10	4-30-68	0	0	0	90
Killdeer	15	1-1-68	30	2-15-68	2	4-30-68	0	0	0	500
Common Snipe	21	1-1-68	21	1-1-68	4	4-30-68	0	0	0	650
Greater Yellowlegs	5	4-10-68	3	4-30-68	3	4-30-68	0	0	0	100
Spotted Sandpiper	4	4-15-68	40	4-30-68	20	4-30-68	0	0	0	550

(over)

(1)	(2)		(3)		(4)		(5)			(6)
III. Doves and Pigeons:										
Mourning dove	50	1-1-68	400	2-15-68	25	4-30-68	0	0	0	3,500
White-winged dove										
IV. Predaceous Birds:										
Golden eagle										
Duck hawk										
Horned owl										
Magpie										
Raven										
Crow	60	1-1-68	60	1-1-68	50	4-30-68	0	0	0	3,750
Bald Eagle	3	1-1-68	3	1-1-68	1	3-2-68	0	0	0	100

Reported by

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Presquile N W R Months of May to August 1968

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Great Blue Heron	16	5-1-68	20	6-6-68	12	8-31-68				1,500
Little Green Heron	6	5-1-68	12	5-25-68	8	8-31-68				400
American Egret	4	5-2-68	16	8-15-68	4	8-31-68				450
II. Shorebirds, Gulls, and Terns:										
Laughing Gull	65	5-1-68	275	6-8-68	25	8-31-68				10,000
Ring-billed Gull	200	5-1-68	200	5-1-68	150	8-31-68				15,000
Herring Gull	75	5-1-68	180	6-25-68	75	8-31-68				7,500
Royal Tern	5	5-1-68	12	6-25-68	10	8-31-68				500
Common Tern	10	5-1-68	50	7-20-68	20	8-31-68				1,500
Killdeer	2	5-1-68	25	5-15-68	12	8-31-68				1,000
Common Snipe	4	5-1-68	4	5-1-68	4	5-1-68				100
Greater Yellowlegs	3	5-1-68	8	6-2-68	2	8-31-68				400
Spotted Sandpiper	20	5-1-68	20	5-1-68	12	8-31-68				1,000

(over)

(1)	(2)		(3)		(4)		(5)	(6)
III. Doves and Pigeons:								
Mourning dove	20	5-1-68	300	7-15-68	100	-31-68		4,000
White-winged dove								
IV. Predaceous Birds:								
Golden eagle								
Duck hawk								
Horned owl								
Magpie								
Raven								
Crow	50	5-1-68	50	5-1-68	10	8-31-68		4,000
Bald Eagle	2	5-15-68	2	5-15-68	1	8-3-68		75

Reported by John C. Fields

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1.751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Presquile N. W. R. Months of September to December 1968

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Great Blue Heron	12	9/1	35	9/16	15	12/31	-	-	-	2,400
American Egret	6	9/1	16	10/1	4	12/12	-	-	-	1,000
Little Green Heron	12	9/1	32	10/1	2	12/1	-	-	-	2,500
Black-crowned night heron	2	11/15	2	11/15	1	12/18	-	-	-	10
American bittern	3	9/10	3	9/10	3	9/10	-	-	-	350
Pied-billed grebe	5	10/12	18	12/31	18	12/31	-	-	-	300
Virginia rail	8	9/12	20	10/21	8	11/15	-	-	-	1,000
Sora rail	25	9/12	30	10/25	25	11/15	-	-	-	2,500
King rail	2	9/12	2	9/12	2	9/12	-	-	-	100
II. Shorebirds, Gulls, and Terns:										
Great Black-backed Gull	3	11/5	16	12/8	15	12/31	-	-	-	300
Ring-billed Gull	200	9/1	250	9/1	200	12/31	-	-	-	20,000
Herring Gull	80	9/1	180	9/1	150	12/31	-	-	-	15,000
Laughing Gull	25	9/1	25	9/1	2	10/15	-	-	-	300
Common Tern	15	9/1	25	9/10	2	10/25	-	-	-	750
Common Snipe	4	9/2	16	12/31	16	12/31	-	-	-	1,000
Killdeer	12	9/1	39	9/26	15	12/31	-	-	-	2,500
Royal Tern	6	9/1	6	9/1	2	10/22	-	-	-	350

(over)

(1)	(2)		(3)		(4)		(5)			(6)
II. Doves and Pigeons:										
Mourning dove	100	9/1	130	9/10	50	12/31	-	-	-	6,000
White-winged dove							-	-	-	
							-	-	-	
IV. Predaceous Birds:							-	-	-	
Golden eagle							-	-	-	
Duck hawk							-	-	-	
Horned owl							-	-	-	
Magpie							-	-	-	
Raven										
Crow	15	9/1	75	9/15	75	12/31				5,000
Bald Eagle	1	9/1	1	9/10	1	9/10				20

Reported by

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1751
Form NR-1A
(Aug.. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Prescott N F R Months of May to August 19 68

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Great Blue Heron	16	5-1-68	20	6-6-68	12	8-31-68				1,500
Little Green Heron	6	5-1-68	12	5-25-68	8	8-31-68				400
American Egret	4	5-2-68	16	8-15-68	4	8-31-68				450
II. Shorebirds, Gulls, and Terns:										
Laughing Gull	65	5-1-68	275	6-8-68	25	8-31-68				10,000
Ring-billed Gull	200	5-1-68	200	5-1-68	150	8-31-68				15,000
Herring Gull	75	5-1-68	180	6-25-68	75	8-31-68				7,500
Royal Tern	5	5-1-68	12	6-25-68	10	8-31-68				500
Common Tern	10	5-1-68	50	7-20-68	20	8-31-68				1,500
Killdeer	2	5-1-68	25	5-15-68	12	8-31-68				1,000
Common Snipe	4	5-1-68	4	5-1-68	4	5-1-68				100
Greater Yellowlegs	3	5-1-68	8	6-2-68	2	8-31-68				400
Spotted Sandpiper	20	5-1-68	20	5-1-68	12	8-31-68				1,000

(over)

(1)	(2)		(3)		(4)		(5)	(6)
III. Doves and Pigeons:								
Mourning dove	20	5-1-68	300	7-15-68	100	-31-68		4,000
White-winged dove								
IV. Predaceous Birds:								
Golden eagle								
Duck hawk								
Horned owl								
Magpie								
Raven								
Crow	50	5-1-68	50	5-1-68	10	8-31-68		4,000
Bald Eagle	2	5-15-68	2	5-15-68	1	8-3-68		75

Reported by John C. Fields

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first migration record for the species for the reporting period.

(3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1752
(Form NR-2)
(April 1946)

UPLAND GAME BIRDS

Refuge Presque Isle W & R Months of January to April, 1948

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods observed	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Bob-white quail	Field borders & swamp edges 300 acres	15	0	0	1-1	0	0	0	20	
Turkey	Entire refuge 1,329 acres of hardwood swamp marsh & uplands	87	0	0	3 males to 1 female	0	0	0	16	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS: Indicate total number in each category removed during the report period.

(6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

*Only columns applicable to the period covered should be used.

3-1752
(Form NR-2)
(April 1946)

UPLAND GAME BIRDS

Refuge Presquile N W R — Months of May to August, 1968

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods observed	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Bob-white quail	field borders & swamp edges 300 ac.	15	0	0	1-1	0	0	0	20	
Turkey	Entire refuge 1,329 acres of hardwood swamp marshes & uplands	87	1	2	3 Males to 1 Female	0	0	0	10	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS: Indicate total number in each category removed during the report period.

(6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

*Only columns applicable to the period covered should be used.

3-1752
(Form NR-2)
(April 1946)

UPLAND GAME BIRDS

Refuge Presquile N W R Months of September to December, 1968

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods observed	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
~~Bob-white quail~~	~~field borders & swamp edges 300 ac.~~	15	8	10	1-1	0	0	0	20	
Turkey	Entire refuge 1,329 acres of hardwood swamp marshes & Uplands	87	1	2	3 Males to 1 Female	0	0	0	16	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS: Indicate total number in each category removed during the report period.

(6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

*Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

BIG GAME

Refuge Presquile N W R Calendar Year 1968

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses				(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Restocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
White-tailed deer	Entire refuge	30	3			27						150	100	50-50

Remarks:

Reported by John C. Fields

INSTRUCTIONS

Form NR-3 - BIG GAME

(1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.

(2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge: once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated total number of young produced on refuge.

(4) REMOVALS: Indicate total number in each category removed during the year.

(5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.

(6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.

(7) TOTAL REFUGE POPULATION: Give the estimated population of <u>each</u> <u>species</u> on the refuge at period of its greatest abundance and also as of Dec. 31.

(8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

17060

Form NR-4
(June 1945)

SMALL MAMMALS

Refuge_____ Year ending April 30, 1948

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs						(5) Total Population
								Share Trapping						
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator* Control	For Restocking	For Research	Permit Number	Trapper's Share	Refuge share	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
Raccoon	[illegible]	[illegible]	0	12	6	0	0	0	0	0	0	0	195	
Muskrat	Marsh, river & creek banks ([illegible] acres)	[illegible]	0	0	0	0	0	0	0	0	0	0	300	
Striped Skunk	Upland & edges ([illegible] acres)	15	0	0	0	0	0	0	0	0	0	0	20	
Gray Squirrel	Woodland swamp & edges ([illegible] acres)	5	0	0	0	0	0	0	0	0	0	0	100	
Ground Hog	Upland, edges & river banks (368 acres)	8	0	0	20	0	0	0	0	0	0	0	5	
Red Fox	[illegible] acres	200	0	0	1	0	0	0	0	0	0	0	1	
Cotton-tailed Rabbit	Fields & edges (300 acres)	12	0	0	0	0	0	0	0	0	0	0	25	
Beaver	Tidal marsh, mud [illegible]	40	0	0	0	0	0	0	0	0	0	0	4	

* List removals by Predator Animal Hunter

REMARKS:

Reported by John S. Fields

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.

REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

3-1757
Form NR-7
(Rev. June 1960)

NONAGRICULTURAL COLLECTIONS, RECEIPTS, AND PLANTINGS (1)

Refuge Prosquile N W R Year 19 68

Species	Collections and Receipts (Seeds, rootstocks, trees, shrubs)						Plantings (Marsh - Aquatic - Upland)						
	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Cause of Loss
None													

(1) Report agronomic farm crops on Form NR-8
(2) C = Collections and R = Receipts
(3) Use "S" to denote surplus

Total acreage planted:
Marsh and aquatic _____
Hedgerows, cover patches _____
Food strips, food patches _____
Forest plantings _____

Remarks: _____

Bureau of Sport Fisheries and Wildlife
Division of Wildlife Refuges

MONTHLY PUBLIC USE REPORT

Refuge name: Presquile N W R
State: Virginia

(This block completed by Washington Office)

State Code 46 (1-2) | Congressional District Code 03 (3-4) | Refuge Code 455 (5-7) | Report Period Yr. 68 (8-11) Mo.

(Card Columns) 12-13		14-18	19-25
ACTIVITY	Code	VISITS FOR THE MONTH Total Number	Total Hours
Hunting: Big Game	01	323	2585
Upland Game	02		
Waterfowl	03		
Other Migratory	04		
Bow	05	323	2585
Fishing: Salt Water	06		
Warm Water	07		
Cold Water	08		
Bird and Animal Calling	09		
Wildlife Photography	10	2	12
Wildlife Observation	11	427	1708
Dog Training	12		
Field Trials	13		
Wildlife Trails and Walks	14		
Wildlife Tours	15		
Wildlife Scenic Veh. Rts.	16		
Camping (related to above)	17		
Picnicking (related to above)	18	392	196
Wildlife Interpretive Center	19		
*Miscellaneous Wildlife	20		

(Card Columns) 26-27		28-32	33-39
ACTIVITY	Code	VISITS FOR THE MONTH Total Number	Total Hours
Swimming	21		
Boating	22		
Water Skiing	23		
Camping	24		
Group Camping	25		
Picnicking	26	8	8
Horseback Riding	27		
Bicycling	28		
Skiing, Sledding, etc.	29		
Ice Skating	30		
Fruit, Nut & Veg. Collecting	31		
Non-Recreational Use (inspections, audits, etc.)	32	15	75
Actual Visits	33	885	
Peak Load Day	34	80	
* Miscellaneous Non-Wildlife	35	12	18

Form 3-123
(March 1968)

*Use blank spaces to indicate the types of activities summarized under miscellaneous codes 20 and 33.

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Presquile N W R County Chesterfield State Virginia

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
Corn	0	0	5	350	51	4080	56		
Buckwheat overseeded with ryegrass	0	0	0	0	10	100/100	10		
Wheat	0	0	10	200	66	0/7	76		
								Clover	4
								Soybeans	66
								Permanent Pasture	93
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations 0 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle				
				2. Other				
				1. Total Refuge Acreage Under Cultivation				239
Hay - Wild				2. Acreage Cultivated as Service Operation				239

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

INT.DUP.,D.C.61-88850

3-1570
NR-88
(4/54)

REFUGE GRAIN REPORT

Refuge Presquile N. W. R. Months of January through December, 1958

(1) Variety*	(2) On Hand Beginning of Period	(3) Received During Period	(4) Total	(5) Grain Disposed of				(6) On Hand End of Period	(7) Proposed or Suitable Use*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat (Seneca)	0	200 bu.	200 bu.	0	150 bu.	0	150 bu.	50 bu.		50 bu.	0
Wheat (Blue boy)	0	600 lbs	600 lbs	0	600 lbs	0	600 lbs	0		0	0
Corn	200 bu.	350 bu	550 bu	0	0	200 bu	200 bu	350 bu	0	350 bu	0
Corn (Hybred-seed)	0	13 bu	13 bu	0	12 bu.	0	12 bu	1 bu	1 bu	0	0
Buckwheat (Japanese)	0	600 lbs	600 lbs	0	600 lbs	0	600 lbs	0	0	0	0
Ryegrass seed	0	500 lbs	500 lbs	0	500 lbs	0	500 lbs	0	0	0	0

(8) Indicate shipping or collection points Hopewell, Virginia

(9) Grain is stored at Presquile National Wildlife Refuge

(10) Remarks All grain on hand is to be used as waterfowl bait and food.

*See instructions on back.

NR-8a

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

(1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR–9.

(3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.

(4) A total of columns 2 and 3.

(6) Column 4 less column 5.

(7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.

(8) Nearest railroad station for shipping and receiving.

(9) Where stored on refuge: "Headquarters granary," etc.

(10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

INT.-DUP. SEC., WASH., D.C. 17065

3-1761
Form NR-11
(2/46)

TIMBER REMOVAL

Refuge Presque Isle N.W.R. Year 1958

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
None								

Total acreage cut over..... Total income.....

No. of units removed B. F..... Method of slash disposal.....

Cords.....

Ties.....

.....

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge: Presquile S & R

Proposal Number: 68-1,283

Reporting Year: 1968

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
May 15	Jimson Weed and other corn field pest plants	Fields 2b,2d,5x & 5e	52½	Atrazine - 80% powder	105 lbs	2lbs/acre or 1.6 a.e./acre	Nitrogen Commercial vendor	
July 25	Wide leaf corn field pest plants	"	Spots	2-4-D	1 gal.	1%	Water	Refuge Tractor PTO
July 16&25	Johnson Grass	All refuge fields & fence row	1%	Dalapon	50 lbs.	5 lbs a.e./acre	Water	"

10. Summary of results (continue on reverse side, if necessary)

3-1750b
Form NR-1B
(Rev. Nov. 1957)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Presquile N W R For 12-month period ending August 31, 1968

Reported by John C. Fields Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat Type	Acreage		(3) Use-days	(4) Breeding Population	(5) Production
	Crops	250	Ducks	679,824	150	100
	Upland	70	Geese	1,109,475		
	Marsh	250	Swans	0		
	Water	1629	Coots	910		
	Total	2199	Total	1,790,209		
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

(1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.

(2) Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.

(3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.

(4) Breeding Population: An estimate of the total breeding population of each category of birds for each area or unit.

(5) Production: Estimated total number of young raised to flight age.

Interior Duplicating Section, Washington, D. C. 27580

This is about the best way we know of transporting a kindergarten class to the refuge. This is the youngest of the groups that visited during this year.

Four picnic tables and a grill purchased this year are the first purchases made for visitor comfort.

The river freezes over very seldom, but the marshes and swamps do often.

The ferry in dry dock and getting sandblasted and painted.

At low tide this bank was slowly creeping out to and under the ferry; so we had to hire a backhoe to dig it out. Note the sign installed this year.

At another low tide after the backhoe completed the job.

The only picture we have of our new refuge sign.

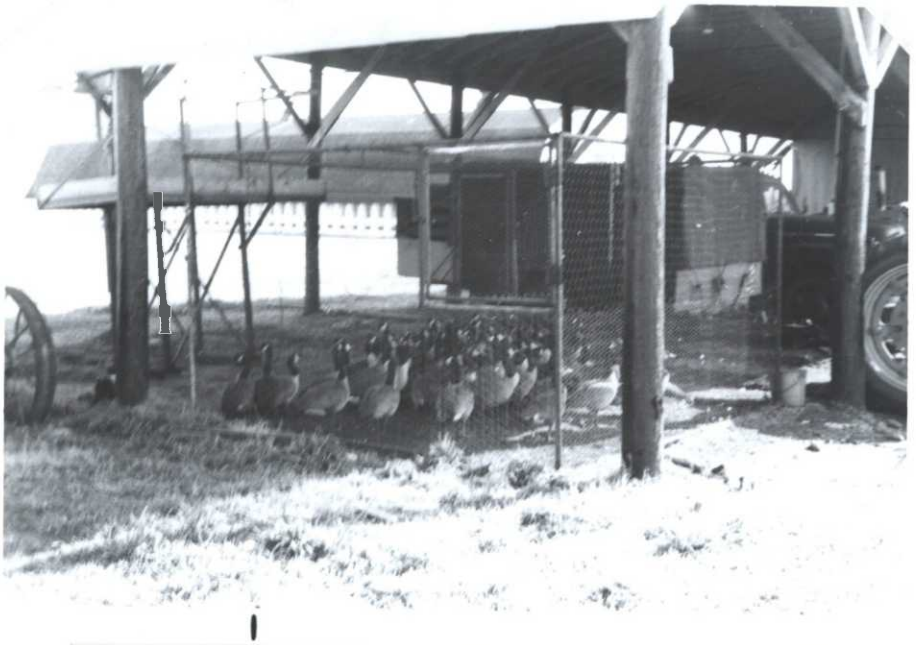
The green manure crop of soybeans-and a few weeds-added a lot of organic to soil.

Not many refuges can boast of ocean going liners going through their corn fields.

The prettiest rack harvested during this years bow hunt.

The largest deer harvested this year is pictured here with the lady that bagged it, the only lady hunting on the first day.

122 geese prior to being taken to the holding pen for banding.



One holding pen and about sixty geese waiting to be banded.

Just a few of the 6,000 mallards we had this year.

One of forty aluminium duck boxes we put up this year, prior to the nesting season.